

## LIGHT EMITTING DEVICE AND METHOD

### ABSTRACT

A method for producing controllable light emission from a semiconductor device includes the following steps: providing a heterojunction bipolar transistor device that includes collector, base, and emitter regions; and applying electrical signals across terminals coupled with the collector, base, and emitter regions to cause light emission by radiative recombination in the base region. In a disclosed embodiment, the step of applying electrical signals includes applying a collector-to-emitter voltage and modulating light output by applying a modulating base current.